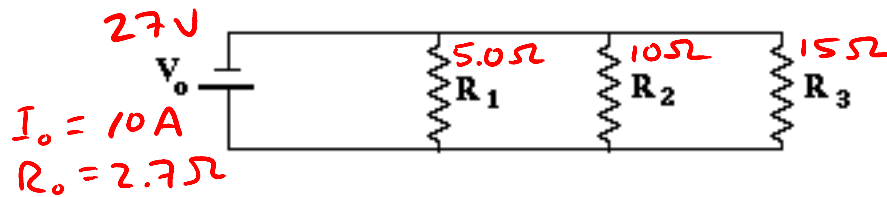


Example #10: In this example $R_1 = 5.0 \, \Omega$, $R_2 = 10 \, \Omega$ and $R_3 = 15 \, \Omega$ and the total current is 10 A. Find the current in each branch.



$$\rightarrow \text{first Find } R_o = \left[\frac{1}{5} + \frac{1}{10} + \frac{1}{15} \right]^{-1} \\ = 2.7 \, \Omega$$

$$\rightarrow V_o = I_o R_o = 10(2.7) = 27 \, V \, (27.3)$$

$$\rightarrow V_1 = V_2 = V_3 = 27 \, V$$

$$\rightarrow \text{finally, } I_1 = \frac{27.3}{5} = 5.5 \, A$$

$$I_2 = \frac{27.3}{10} = 2.7 \, A$$

$$I_3 = \frac{27.3}{15} = 1.8 \, A$$

$$(\text{check: } I_1 + I_2 + I_3 = 10 \, A)$$